



3rd Federal UAS workshop 2019 Proposal

Proposal Title

With this Call for Proposals, the National Land Imaging and Innovation Centers are funding work that will fill observational gaps with new or modified UAS-deployed sensors. Your proposal below should have a USGS PI who can articulate what science or operational challenge a new or improved UAS system can fill, and a technology partner (other Federal Agency, industry, NGO, etc.) who can provide a description of the technology. These are 1-year funding opportunities, for up to \$100K, and the funds must be obligated before the end of FY19.

DUE: Friday, May 31, 2019 to jstock@usgs.gov

The challenge and the opportunity:

Describe the scientific challenge, why it is important, and how data collected from the air will help solve it. This section should give the reader a grasp of the scientific opportunity or information gap that will be filled by the proposed work. Provide sufficient detail as to the role UAS technologies will play in testing your hypothesis or solving the challenge. You may want to describe how to evolve the research you are proposing into an operational capability.

Science requirements (aka, what kind of data do you need and when?)

Describe your specific data needs to address the science problem, including all of the associated instruments needed to address it. For example, if imagery is needed, report the imagery band or type (e.g., color, infrared, etc.), pixel size required (e.g., < 5 cm), locational accuracy needed (e.g., +/- 50 cm), day or night flight, flights more than 400 feet above ground level, and any other parameters you require. If you need additional data types, report the sensor, and the data parameters needed (e.g., gas CO2 sensor, +/- 100 ppm, +/- 1 m locational accuracy). In short, provide a description of the data needs that would be sufficient to specify all the instruments needed to attain it and the timeframe for when the data needs to be collected and the data collection location.

Technology needs: What sensor or system innovations do you need to meet science requirements?

Describe the sensor or system innovations you need to meet your science requirements. For instance, if you need to collect gases, describe the technology components to the system that would allow you to meet your data needs. Also describe any special data processing requirements and your data management plans.

SAMPLE ENTRIES ARE PROVIDED IN THE SECTIONS BELOW, INCLUDING A MOCK BUDGET

Personnel:

USGS PI: Jane Q Landslider, 100 Lost Lane, Island of Lost Toys, CA, 00000, JaneQ@usgs.gov, (650) 329-xxxx
Center name and location: Island of Misplaced Toys Science Center, California
Center Director: I.C. UROK, icurok@usgs.gov
Center AO: U.R. Not, urnot@usgs.gov
USGS collaborators: Name, email
Support: Describe what logistical support you and your team could provide for lab or field testing. Include vehicles, lodging, instruments, and any other logistical help you could provide.

Partners:

Technology Partner(s): John R Go, University of Irreproducible Results, Department of Engineering, 100 No Way Lane, Unknown, CA, 00000, jargo@uIR.edu, (xxx) xxx-xxxx;
Support: Describe any cost-sharing, instruments, sensors or other assets your technology partner can provide to help the mission.

USSG Mission Area alignments

Our proposal results would contribute towards the goals of the following Mission Areas (check applicable):

- ☐ Climate and Land Use Change
 ☐ Core Science Systems
 ☐ Ecosystems
☐ Energy and Minerals, and Environmental Health
 ☒ Natural Hazards
 ☒ Water

May we share your proposal with the Associate Directors for the Mission Areas you checked above?

- ☐ No
 ☒ Yes

Notes: Successful applicants will provide a data management plan, and publication plans, including a summary report of the results within 1 year after the UAS data has been acquired and delivered to the scientist. Questions? Contact Bruce Quirk (quirk@usgs.gov) or Jonathan Stock (jstock@usgs.gov).

Budget Summary: Summarize how you will use up to \$100,000 funding

Category	To USGS	To Technology partner	Total budget
Partnership tool:		SBIR, IAA Annex, Co-Operative Agreement, etc.	
Personnel: Jane Q. Landslider, USSG; John R. Go, UIR; Dew Werk, graduate student, UIR.	USGS salaries covered by existing projects. 1 semester of support for Dew Werk, UIR	1 semester of oversight by John R. Go, UIR, machining and electrical facilities or fabrication	\$20,000, includes student salary, and University overhead
Travel: Local	Covered by existing project	Local	
Equipment and supplies:	Cell phone modem, servo-mechanism, micro-controller, reservoir, tracer	Miscellaneous electrical fabrication supplies, lab support.	\$5000
Operational costs:	Cell phone contract	-	\$1200
Sub-total			\$26,200
Total	With 18.27% Cost Center overhead (\$4788.)		\$30,988

Additional page if needed, do not exceed.

